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## CABINET AFFAIRS STAFFING MEMORANDUM

DATE: 7/29/83 NUMBER: 118834CA DUE BY: \_\_\_\_\_SUBJECT: Cabinet Council on Economic Affairs - Tuesday, August 2, 19838:45 a.m. - Roosevelt Room

	ACTION	FYI		ACTION	FYI
ALL CABINET MEMBERS	<input type="checkbox"/>	<input type="checkbox"/>	Baker	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Vice President	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Deaver	<input type="checkbox"/>	<input type="checkbox"/>
State	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Clark	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Treasury	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Darman (For WH Staffing)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Defense	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Harper	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Attorney General	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Jenkins	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Interior	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
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## REMARKS:

The Cabinet Council on Economic Affairs will meet on Tuesday, August 2, 1983 at 8:45 am in the Roosevelt Room. The agenda and background papers are attached.

RETURN TO:

☐ Craig L. Fuller  
Assistant to the President  
for Cabinet Affairs  
456-2823

☒ Tom Gibson  
Associate Director  
Cabinet Affairs  
456-2800

DCI  
EXEC  
REG

THE WHITE HOUSE  
WASHINGTON

July 29, 1983

MEMORANDUM FOR THE CABINET COUNCIL ON ECONOMIC AFFAIRS

FROM: ROGER B. PORTER *RBP*

SUBJECT: Agenda and Papers for the August 2 Meeting

The agenda and papers for the August 2 meeting of the Cabinet Council on Economic Affairs are attached. The meeting is scheduled for 8:45 a.m. in the Roosevelt Room.

The Council will consider a report from the Working Group on Financial Market Developments. The group has prepared two memorandums. The first, from Under Secretary Sprinkel is "Concerns About Monetary Policy During the Recovery." The second, from CEA Member William Poole, is "Velocity of Money."

Attachments

THE WHITE HOUSE  
WASHINGTON

CABINET COUNCIL ON ECONOMIC AFFAIRS

August 2, 1983

8:45 a.m.

Roosevelt Room

AGENDA

1. Financial Market Developments and Monetary Policy (CM#111)

THE UNDER SECRETARY OF THE TREASURY  
FOR MONETARY AFFAIRS

WASHINGTON, D.C. 20220

July 29, 1983

## MEMORANDUM FOR CABINET COUNCIL ON ECONOMIC AFFAIRS,

From: Beryl W. Sprinkel *Beryl W. Sprinkel*  
Subject: Concerns About Monetary Policy During the Recovery

Since early spring, we have cautioned that the acceleration of money growth, which began last August, was becoming increasingly worrisome. Our concern, then as now, was that such highly stimulative monetary policy would, if it continued, undermine the basis of a sustainable recovery. Specifically, our immediate concerns focus on the behavior of interest rates; if money growth is not moderated, interest rates can be expected to move up, slowly at first (as they have since early May), but more rapidly later on. Our longer-term concerns center on the inflationary potential of many months of rapid money growth, recognizing that a resurgence of inflation could quickly reverse the progress made in reducing interest rates and preclude sustainable economic expansion.

A sustained increase in the rate of money growth causes an increase in inflation, but with a substantial lag of a year and a half to two years. In the interim, accelerated money growth can induce an increase in economic activity, typically with a lag of six to nine months. Economic stimulus is, however, only the immediate, temporary effect of accelerated money growth; if excessive money growth is maintained, the ultimate, permanent effects are rising inflation and interest rates which are powerful deterrents to real economic growth.

Based on historical patterns, the economic strength in the second quarter is a predictable outcome of the acceleration in money growth that began last August. Financial deregulation and the behavior of velocity have generated considerable uncertainty about the meaning of recent money growth; those uncertainties notwithstanding, money growth has apparently been strong enough to stimulate economic activity, despite the fact that interest rates have generally risen since the beginning of the year. Since the short-run relation between money growth and economic activity has held, it is difficult to argue that the long-run relation between money growth and inflation will not. Unless that long-run relation has broken down, inflation would be expected to escalate by mid-1984, particularly if money growth is not slowed immediately.

## Interest Rates

In the cyclical downturns predating 1970, interest rates have tended to move with the business cycle. Interest rates typically reached their cyclical low point near the trough of a recession and rose thereafter as the economy expanded and the private demand for credit increased. In each of the postwar recessions before 1970, both short- and long-term rates turned upward within a few months of the onset of economic recovery. Over that long period of history, however, prices were relatively stable and inflation and the public's expectations about future inflation were therefore a minor consideration for interest rate behavior.

Since the late 1960's, however, inflationary expectations have become an increasingly important factor in the cyclical behavior of interest rates. The decline in inflation and inflationary expectations during a recession and the early stages of a recovery therefore allows interest rates to continue to fall longer after a recession ends and a recovery begins. After the recession that ended in early 1975, for example, short- and long-term interest rates continued to fall for a year and a half to two years into the economic recovery. As long as inflationary expectations are falling, that downward pressure on interest rates may outweigh the upward rate pressure emanating from expanding credit demand, allowing rates to continue to fall as the economy expands. If inflation is allowed to reaccelerate, however, inflationary expectations will reinforce other upward market pressures and help drive rates up again.

Since nominal interest rates now remain high relative to current actual inflation rates, there is room for interest rates to fall farther in response to declining inflationary expectations, even as the recovery phase proceeds. That opportunity will be lost, however, if inflation and inflationary expectations are allowed to resurge. Since projected budget deficits are likely to exacerbate upward pressures on interest rates during this expansion, it is critically important that monetary actions be designed to facilitate the continued downward adjustment of inflationary expectations. That requires an announced, predictable, noninflationary monetary policy. Specifically it requires that money growth be gradually decelerated in order to limit the inflationary potential of the 14% money growth that has occurred in the last ten months. The more predictable that deceleration is, the higher the chances that additional declines in interest rates can occur. It is, of course, also critical that the Federal Reserve avoid any sharp or protracted restraint on money growth.

Concerns about slowing money growth typically focus on a rise in interest rates that may accompany such a policy. It is likely, however, that any rise in rates associated with the slowing of reserve and money growth would be temporary and

relatively short-lived. Furthermore, short- and long-term interest rates are already rising because of the markets' concerns about rapid money growth; many months of accelerated money growth have not generated any net declines in interest rates since last fall. While the temporary rise in interest rates that may accompany a slowing of money growth is nothing to applaud, it is preferable to the permanent rise in long-term rates that can be expected if money growth continues unabated.

However, it is dangerous for the Federal Reserve to try to prevent or ameliorate movements in interest rates that are dictated by fundamental market forces; a policy designed to do so typically sacrifices appropriate control of the monetary aggregates. In the current situation, Federal Reserve policy actions aimed at resisting upward market pressures on interest rates would imply continued rapid growth of bank reserves. Thus, the long-run goal of containing money growth to a non-inflationary pace, which is ultimately a prerequisite for lower long-term interest rates, is sacrificed to the short-run goal of attempting to contain interest rates. Since the ability of the Federal Reserve to influence interest rates in the face of opposing market forces is severely limited, even this short-run goal cannot be achieved for any lengthy period of time; with respect to the long-run goals of price stability and lower interest rates, a Federal Reserve policy that attempts to hold down interest rates is counter-productive. Political pressures on the Federal Reserve to hold down interest rates contribute to the problem by adding to the financial markets' skepticism that noninflationary monetary policy will be pursued.

### The Future

It is vitally important that we remain sensitive to the danger of repeating the mistakes of the past when rapid money growth has been allowed to continue into the recovery phase, laying the groundwork for a renewed resurgence of inflation. Important lessons can be learned, for example, from the 1977-80 period. After a period when money growth was relatively well controlled (and inflation and interest rates fell), money growth was accelerated rapidly in late 1976 and averaged 7.7% over the following four years. While the economy continued to expand in the short run, real GNP growth fell in 1979 and became negative in 1980 while unemployment increased. Inflation soared to double digits and interest rates rose to historic highs. The experience of the late 1970's illustrates clearly that we cannot succeed over the long run in "buying" either lower interest rates or higher real economic growth with inflationary monetary policy.

It is possible that the Federal Reserve has already taken the initial steps to slow the rate of money growth. Growth of both bank reserves and the monetary base have decelerated

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rapidly in the last three or four weeks, which implies a slowing of money growth in the weeks ahead.

The redefinition of the money growth targets announced by the Federal Reserve last week are appropriate, given the money growth path that has occurred in the last ten months. While a continuation of very rapid money growth is a dangerous policy, attempts to reverse the surge in money growth would risk serious damage to the economy. If the new money targets are achieved, the gradual deceleration that is needed would occur.

It is likely that the institutional changes that have generated so much controversy and uncertainty about the growth of the monetary aggregates is now behind us. It is therefore important that the Administration support the Federal Reserve's stated policy of a gradual slowing of money growth and that the Federal Reserve be urged to achieve the new money growth targets. A noninflationary and predictable monetary policy, which is pre-announced and adhered to by the Federal Reserve and consistently supported by the Administration, would help reduce the current confusion about monetary policy and minimize the uncertainty premium that is incorporated into the level of interest rates.

Given the lag in their effect on the economy, tailoring monetary policy actions to immediate developments has, in the past, sacrificed the long-run goal of price stability to a succession of short-run problems and crises. Despite the continuing good news about the current inflation rate, it is clear that if actions to slow the rate of money growth are delayed until an actual increase in inflation is observed, it will be too late to take the necessary preventive actions and the cost of corrective actions will again be very high.

## COUNCIL OF ECONOMIC ADVISERS

WASHINGTON, D. C. 20500

CM#111

MARTIN FELDSTEIN, CHAIRMAN  
WILLIAM A. NISKANEN  
WILLIAM POOLE

July 29, 1983

## MEMORANDUM FOR CABINET COUNCIL ON ECONOMIC AFFAIRS

FROM: William Poole *W.P.*

SUBJECT: Velocity of Money

In recent years, and especially recent quarters, debates over monetary policy have focused importantly on the behavior of the velocity of money. This memorandum reviews the historical and recent behavior of velocity, summarizes the principal regularities of velocity behavior, and explores the policy implications of uncertainties over future velocity behavior.

The measured income velocity of money is nothing more than the ratio of GNP to the money stock. That is,  $V = \text{GNP}/M$ . The emphasis that many place on this ratio reflects the fact that it is a convenient way to organize thinking about monetary effects on the national economy.

The amount of money that economic agents--businesses and households--want to hold depends importantly on the scale of their transactions. Higher income households carry larger cash balances than lower income households; larger businesses carry larger balances than smaller businesses; and larger economies carry larger balances than smaller economies. While there are many determinants of the amount of money people hold, the scale of their transactions is by far the most important of these determinants. Thus, it is convenient to conduct monetary analysis in terms of velocity, starting with the working assumption that money and GNP are proportional to one another and going on to examine factors that disturb a strictly proportional relationship.

Any particular household or business adjusts its cash balances to the scale of its transactions. But for the economy as a whole the central bank determines the total quantity of money in the system, and so all individuals together cannot determine the amount of money they hold. One person's effort to adjust his cash balance necessarily affects someone else's cash balance. These individual efforts to adjust balances affect the total level of transactions in the economy, changing real activity and/or the price level. Thus, whereas for the individual the scale of transactions determines the amount of money held, for the

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economy as a whole the amount of money determines the aggregate scale of transactions--the level of nominal GNP.

Monetary policy would be relatively simple if velocity were a constant. Unfortunately, velocity changes due to a variety of factors that affect the amount of money that people want to hold relative to the scale of their transactions. Among these factors are interest rates, changing payments technology, and changing financial regulations.

In addition to factors known to affect velocity, there is a degree of apparent randomness involved in the behavior of velocity. Some of this randomness is understood and some not. Two points are particularly important in the current context. First, unusual shocks to GNP can cause GNP to change in the absence of any accompanying monetary change. An excellent example of such a disturbance is the outbreak of the Korean War in 1950, which produced a surge of GNP without an increase in the money stock of comparable magnitude. Another example going in the opposite direction involved the disruptive effect of the nationwide steel strike beginning in the late summer of 1959, which produced a surge in GNP in 1959:II due to anticipatory inventory buying and then a decline in GNP in 1959:III. Other sharp changes in GNP for which no satisfactory explanation may exist are also typically positively correlated with velocity changes.

Just as special GNP disturbances affect  $V$  by affecting the numerator, so also do special  $M$  disturbances affect  $V$  by affecting the denominator. Changes in the money stock are not transmitted quickly and reliably into changes in GNP. Sometimes a temporary surge or sag in the money stock may have relatively small initial effects on GNP, and therefore simply change the ratio of GNP to money--velocity. The issue of monetary lags is so important in the present context that it deserves careful attention.

#### Lags in Monetary Effects on GNP

It is not surprising that there may be little change in GNP when the money stock bounces up and then back down. Basic business decisions on production and pricing are not much affected by most transitory factors. But what happens when the money stock bounces up and stays up? Other things equal, the level of GNP will in time adjust to the higher level of the money stock. But the adjustment is likely to be spread over time, in part because economic agents will ordinarily not be able to distinguish reliably between transitory and permanent monetary disturbances.

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Practically all economists believe that the economy's reaction to a change in the money stock is distributed over time. Monetarist models usually find that the GNP adjustment is largely complete in four or five quarters; Keynesian models tend to find that full adjustment to a monetary change takes 2 to 3 years, and perhaps even longer. Thus, since the initial effects on GNP are smaller than the ultimate effects, a sharp change in the money stock first shows up mostly as a change in velocity, and only later are the full effects transmitted to GNP as velocity returns to normal.

The abnormal decline in velocity in 1982 has led some to conclude that velocity is much less stable now than it was in the past and a much less reliable guide to monetary policy. Because of the importance of lags in interpreting velocity behavior over the past six quarters, that conclusion is not so clear as many believe, as will be argued in the next section.

#### Evidence on Velocity Behavior.

Because economists of all persuasions agree on the importance of lags, the velocity concept used in this section is that of GNP in a particular quarter divided by the money stock two quarters earlier. Milton Friedman used that concept in his recent PEPAB discussion. Chairman Volcker also referred to a lagged velocity concept on page 3 of his July 20 testimony. Chart 1 shows velocity on a two-quarter lag basis. Recession periods are shaded in.

Before the recent unusual behavior of velocity, certain regularities in velocity behavior were generally accepted. First, there seemed to be a fairly reliable long-run trend to velocity; velocity in the post-war period grew at an average annual rate of about 3 percent. A trend line reflecting that average growth rate is shown in the chart. A major issue regarding this trend is the extent to which it was caused by the upward trend in interest rates by the upward trend in income per capita, or by changing transactions habits and technology. This important issue remains unresolved in the academic literature.

Second, velocity has exhibited a standard procyclical pattern, tending to fall during business cycle contractions and rise during business expansions. That regularity appears fairly clearly in Chart 1, as can be seen by examining the behavior of velocity in the neighborhood of the shaded recession periods. Academic research suggests that part but not all of the procyclical pattern in velocity

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can be attributed to the procyclical pattern in interest rates.

Third, as argued above, disturbances to income can occur in the absence of any unusual monetary behavior thus changing measured velocity for a time. The effect of unusual disturbances to GNP on velocity is not surprising. Measuring velocity as  $V_t = \text{GNP}_t / M_{t-2}$ , all that this observation implies is that there are factors that change GNP other than money growth. Historically these factors have tended to be transitory: velocity has returned to its longer run trend after such disturbances.

Chart 2 provides a scatter diagram using quarterly data 1948:I through 1983:II relating changes in velocity on the vertical axis to the acceleration in nominal GNP on the horizontal axis. It is the acceleration of GNP rather than GNP growth itself that is important. The economy may be growing relatively smoothly at either 6 percent inflation or 2 percent inflation with velocity also growing relatively smoothly at about 3 percent per year. In Chart 2 the GNP acceleration is measured by the deviation of GNP growth from its average growth over the prior three years. Observations from 1981:I through 1983:II are circled. This chart shows that recent experience has been unusual but not unprecedented. Sharp accelerations and decelerations in GNP growth are almost invariably associated with sharp increases and decreases in velocity.

A third regularity in velocity behavior--the decline (increase) in velocity that typically occurs when there is an upward (downward) shock to money growth-- is much more difficult to document. Indeed, using data through 1980 the correlation between changes in money growth and changes in velocity is about zero. Some background discussion is necessary to explain the problem.

As I emphasized at an earlier CCEA meeting, throughout most of the post-war period the Federal Reserve has conducted monetary policy by controlling money market interest rates fairly tightly in the short run, allowing money growth to fluctuate substantially. Consequently, large increases in money growth are typically associated with a strong economy, high credit demands, and rising interest rates. Given the accommodative nature of Fed policy, over most short intervals money has been pulled along by the economy rather than being independently shocked. Under these conditions a surge in the money stock is not necessarily associated with an abnormal decline in velocity; that effect is offset by the tendency of velocity to rise during business cycle recoveries. Similarly, large declines in money growth are frequently associated with a

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weak economy, slack credit demands, and falling interest rates. These sags in money growth do not necessarily produce abnormal increases in velocity because velocity growth typically slows when the economy is weak.

Two examples serve to illustrate these points. The acceleration of money in 1977--to 8.2 percent over the four quarters ending 1977:IV compared to 6.1 percent over the four quarters ending 1976:IV--reflected Fed efforts to hold down interest rates in a strong economy. This acceleration of money was associated with above-trend velocity growth. On the other hand, the unusually high money growth in 1979:II and 1979:III--high relative to the period immediately before and after--did not feed proportionally into GNP growth in 1979:IV and 1980:I, and so velocity fell. For another example, it is not surprising that velocity rose sharply when the money stock fell at a 3.8 percent annual rate in 1980:II.

These examples illustrate but do not prove the proposition that sharp changes in money growth due to special shocks are negatively correlated with velocity changes. I am convinced that the proposition is correct, but selective reading of the data, excluding observations that do not fit the hypothesis, is unsatisfactory as a form of proof.

### Summary of Major Features of Velocity Behavior

Velocity, defined as  $V_t = \text{GNP}_t / M_{t-2}$  to allow (crudely) for lags in the effect of monetary changes on GNP, has exhibited three important regularities in the post-war period.

First, velocity has increased fairly reliably at an annual rate of about 3 percent. After departing from trend, velocity has tended to return to its established track.

Second, velocity exhibits a procyclical pattern, tending to grow more slowly than trend during business contractions and more rapidly than trend during business expansions

Third, non-monetary factors are sometimes significant in causing changes in nominal GNP. Exceptionally large increases or decreases in GNP growth in a particular quarter, or over several quarters, are ordinarily not caused by changes in money growth two quarters earlier. Thus, these large GNP changes are typically accompanied by large velocity changes.

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Fourth, shocks to money growth that occur independently of the state of business and credit demand do not fully feed through to GNP on a fixed lag basis. Thus, velocity will temporarily fall (rise) when an independent disturbance causes the money stock to surge (sag). This proposition is difficult to document because so many large changes in money growth have been the passive result of Federal Reserve efforts to control interest rates.

#### Implications of Velocity Regularities For Interpreting Recent Velocity Behavior

As Chart 1 so vividly shows, velocity has declined substantially since the middle of 1981. That is, over this period GNP growth has been much lower than money growth. There are two basic ways to interpret this experience.

One interpretation is that financial deregulation and changing technology, and perhaps other factors, have permanently changed the long-run velocity trend. Some observers also argue that velocity is likely to be more variable in the future, and therefore a less reliable guide to monetary policy. This general view has been so extensively debated that there is no need to examine it further here.

A second interpretation is that there has been no fundamental change whatsoever in velocity behavior. On this view the 1982 decline in velocity reflects an unusual coincidence of two known regularities of velocity behavior.

First, we have experienced a recession of unusual depth and unusual length. The twelve-month recovery from the 1980 recession--the shortest recovery period in U.S. history--was incomplete. The economy was contracting for 22 of the 36 months in 1980-82, dropping the level of utilization of labor and capital to the lowest level since the 1930s. It was to be expected that an unusual deceleration in GNP would be associated with a fall in velocity. That is, what would be really surprising would be to observe a sharp deceleration in GNP accompanied by an unusually large increase in velocity, or vice versa. In Chart 2 such observations would be in the extremes of the northwest and southeast quadrants.

Second, the rate of money growth over the four quarters of 1982--8.5 percent--was close to being the highest of any four-quarter period since the Korean War. The only higher four-quarter periods are those ending 1983:II, 1983:I, 1981:II, and 1978:III. Perhaps more important, the recent pattern of sharp accelerations and decelerations in money is unprecedented in post-war U.S. experience. Money growth

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averaged 7.8 percent over the four-year period from 1976:IV through 1980:IV. Over the four quarters of 1981 money growth was 5.1 percent. This sharp deceleration contributed to an increase in velocity in 1981 as well as to the severity of the 1981-82 recession. The acceleration in money growth to 8.5 percent in 1982 contributed to a decline in velocity as well as to the ending of the recession.

These two very different interpretations of recent velocity behavior have vastly different policy implications. It is unfortunately the case that it is impossible to provide firm evidence supporting one interpretation over the other at this time. The only conclusive evidence will be several additional quarters, and perhaps several additional years, of GNP and money data.

#### Monetary Policy Options.

The Fed does not have the luxury of avoiding a conclusion on the most probable interpretation of recent velocity behavior. The uncertainty over velocity does not provide a reason to hold interest rates about unchanged until the situation becomes clear. Lags foreclose that option. Moreover, no one has ever demonstrated a relation between interest rates and GNP that provides a satisfactory guide to monetary policy.

The structure of today's monetary policy problem is illustrated in Chart 3. Velocity and its trend are the same in this chart as in Chart 1. But by showing history only from 1975 Chart 3 can have an expanded scale.

The view that the velocity trend has slowed permanently suggests a future velocity path like Path C in Chart 3. The Midsession Review economic assumptions are for nominal GNP to grow at about 10 percent per year for the next two years. If Path C involves velocity growth of 1 percent per year, then the appropriate money growth target is 9 percent per year.

On the other hand, if we accept the view that the underlying velocity trend has not changed and that velocity will return to trend along Path A in Chart 3, a very serious policy problem arises. Along Path A velocity might be rising at a 6 percent rate. If we retain the economic assumption of 10 percent growth in nominal GNP, then we need money growth of only 4 percent. Bringing money growth down from 12 percent over the last four quarters to 4 percent over the next four quarters could produce a pause in the recovery lasting several quarters. But failing to reduce money growth to 4 percent entails

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acceptance of very rapid growth in nominal GNP with attendant price and interest rate pressures staring sometime within the next two to six quarters.

Path B in Chart 3 indicates a third possibility. We may have had a one-shot change in the level of velocity while the economy was adjusting to lower inflation and financial deregulation. But from now on velocity may resume its 3 percent growth. In this case money growth should be reduced to 7 percent, or somewhat lower to allow for the usual procyclical pattern to velocity growth, in order to be consistent with our economic assumption of 10 percent nominal GNP growth.

There are two additional reasons for favoring money growth in the 5-7 percent range. First, this rate of growth minimizes risk. It will be just about right if velocity takes Path B, but not too horribly wrong if velocity takes Path A or Path C. Secondly, the Fed's credibility with market participants will be very important to the behavior of interest rates. Money growth in the 5 - 7 percent range is widely regarded as sensible; the policy is defensible and sustainable, particularly while the recovery is proceeding briskly. We need more steady money growth. Unless events go just right, market and political reactions are likely to force a reversal of a policy designed to hit, or permit, money growth as high as 9 percent or as low as 4 percent.

In closing, one point deserves repetition. To reflect the importance of lags, the velocity measure used in this memo is  $V_t = GNP_t / M_{t-2}$ . Decisions on money growth must be made before the velocity outcome is known. Once the velocity outcome is known it will be too late to adjust monetary policy to counter an unpleasant surprise.

Chart 1

VELOCITY (USING  $M1(-2)$ ) AND TREND

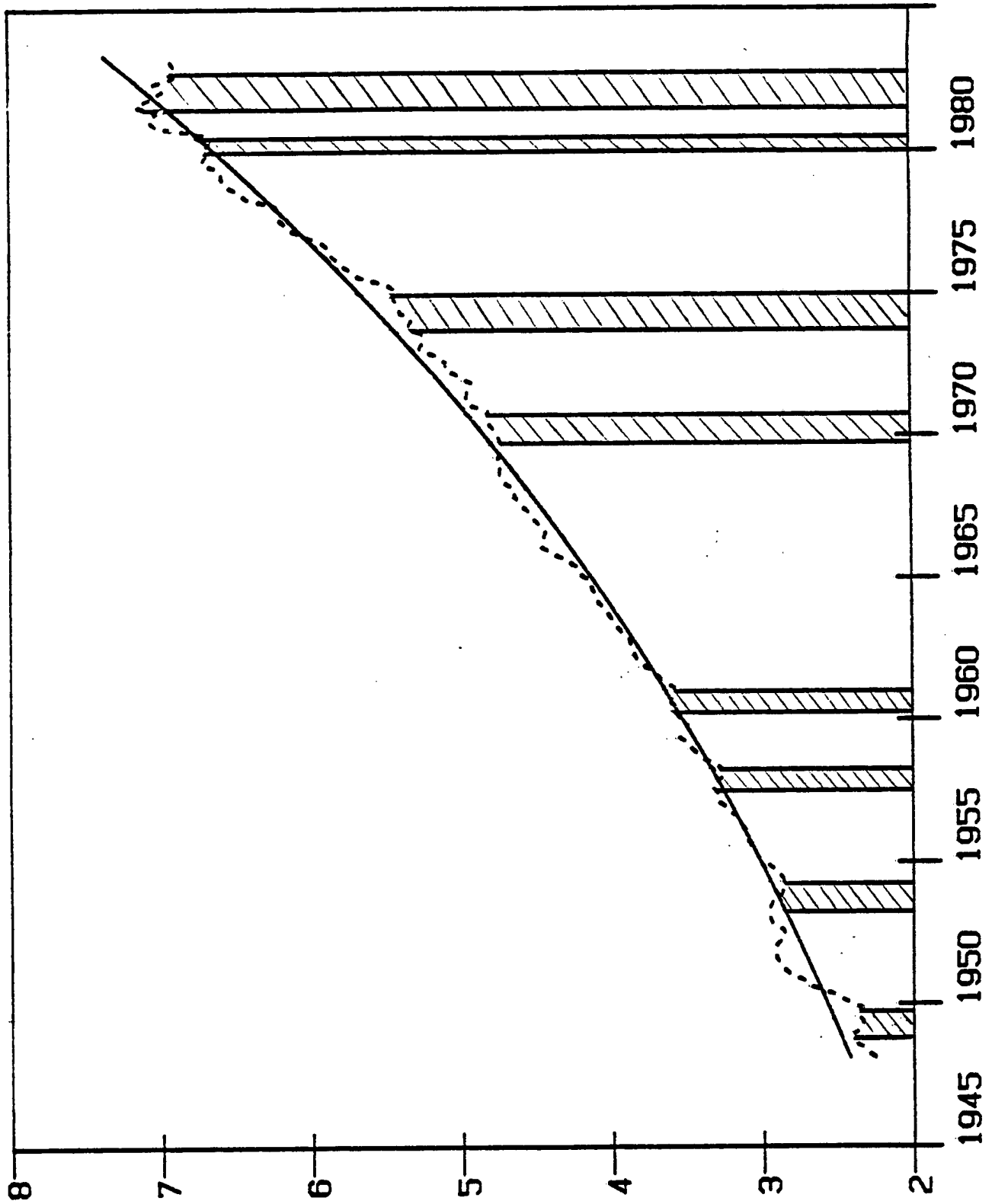


Chart 2

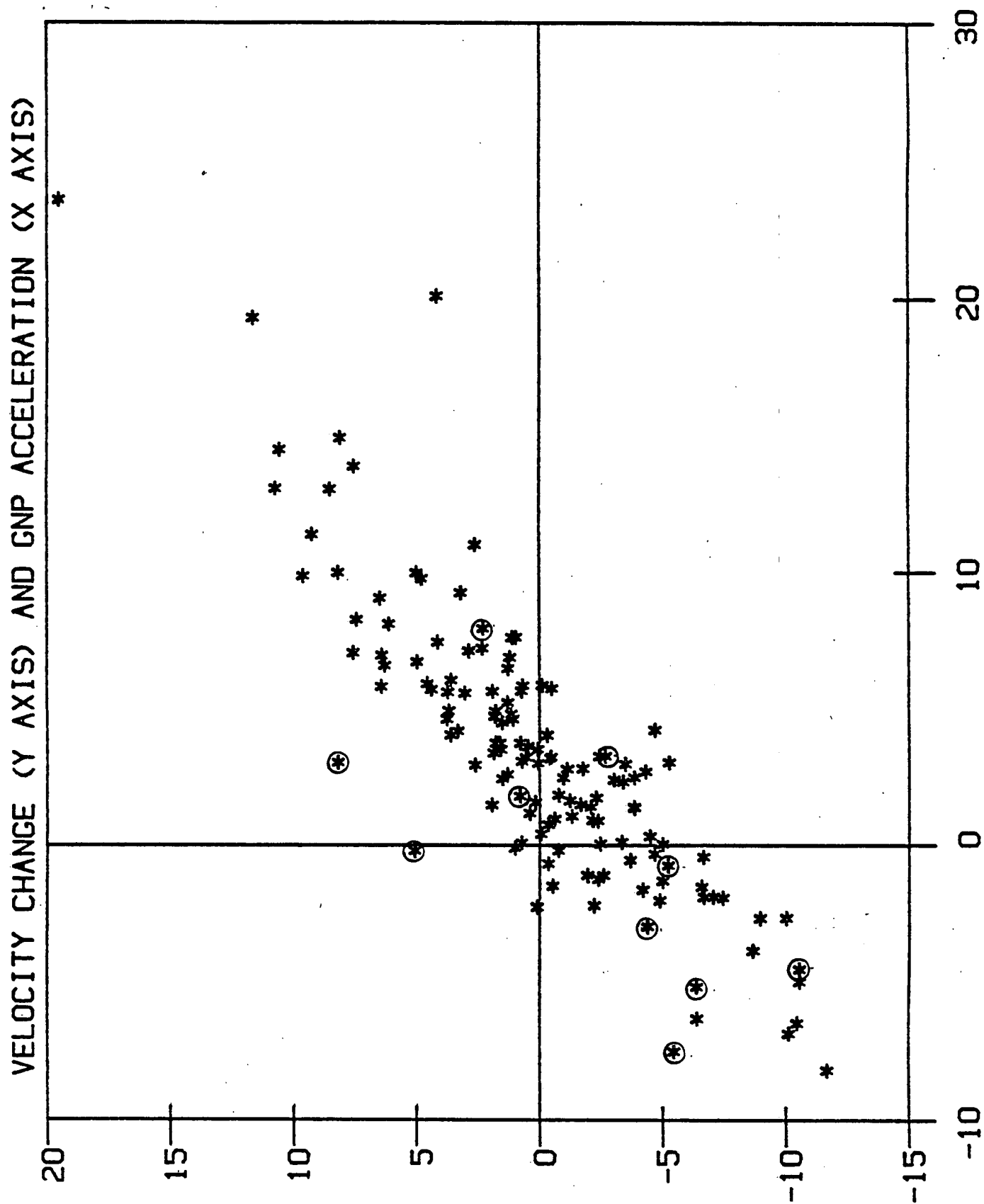


Chart 3

# VELOCITY (USING M1(-2)) AND TREND

